MODEL DAX 420: EXPLOSIVE GAS DETECTOR
CH_4 - H_2 - C_xH_y...

The DAX 420 detector was designed to continuously measure the presence of various explosive gases in the air.

Its measurement principle, catalytic combustion, gives it its major benefits:
- very short response time,
- accuracy and reliability of measurements.

By connecting it to a Dalemans unit or to any other instrument that can receive a 4..20 mA signal, you will benefit from a highly flexible installation.

ATEX certified, this detector is especially suitable for the industrial sector, whose applications are located in an explosive atmosphere.

TECHNICAL SPECIFICATIONS

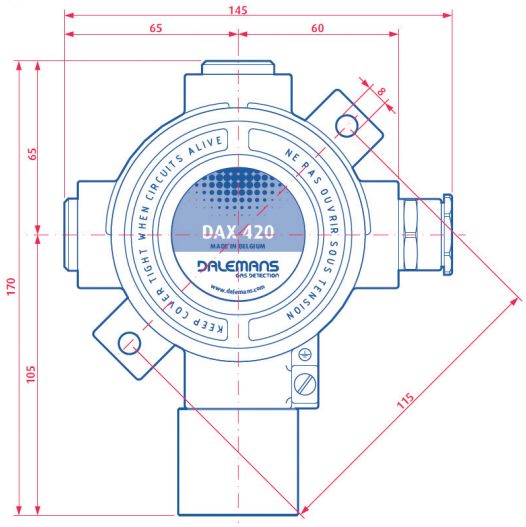
MODEL	**DAX 420**	**STORAGE TEMPERATURE**	-40ºC to +80ºC
SENSING HEAD	Stainless steel 1.4404 (AISI316L)	**TEMPERATURE RANGE**	-20ºC to +55ºC
SINTERED METAL FILTER		**AMBIENT HUMIDITY**	20 - 90 % HR
JUNCTION BOX	Aluminium	**INTERMITTENT HUMIDITY**	10 - 99 % HR
DIMENSIONS / WEIGHT	193 x 145 x 90 mm / 1.500 g	**PRESSURE**	90 - 110 kPa
SENSOR TYPE / OUTPUT SIGNAL	Catalytic (Pellistor) / 3-wire 4..20 mA current loop	**CABLE CROSS SECTIONAL AREA**	0.75 - 2.5 mm2 (solid wires)
ADJUSTMENTS	Zero and calibration by internal potentiometers		
MEASURING RANGE	0 - 100 % LEL	**MAX. CABLE LENGTH**	1.000 m
RESOLUTION	± 3% full scale < 60% LEL	**LOOP RESISTOR**	50 - 750 ohms
	± 3% full scale < 60% LEL	**INGRESS PROTECTION**	IP 6X (dust tight)
RESPONSE TIME (T90)	< 30 sec.	**CABLE ENTRIES**	1 x M20 / 6.1 - 11.7 mm (other size upon request)
EXPECTED OPERATING LIFE SPAN	> 2 years	**HAZARDOUS AREAS**	Zones 1 or 2 (gas) - Zones 21 or 22 (dust)
SUPPLY VOLTAGE	19 - 30 Vdc	**EQUIPMENT GAS GROUPING**	IIC (methane, propane, ethylene, hydrogen, acetylene)
SUPPLY CURRENT*	Max. 90 mA	**CERTIFICATES**	FTZU 09 ATEX 0182

* Depends on the type of sensor used

Approval (ATEX + IECEx): II 2G Ex d IIC T6
II 2D Ex tD A21 IP6X T85ºC

Standards: EN 60079-0:2006, EN 60079-1:2007, EN 61241-0:2006, EN 61241-1:2004

DIMENSIONS (mm)

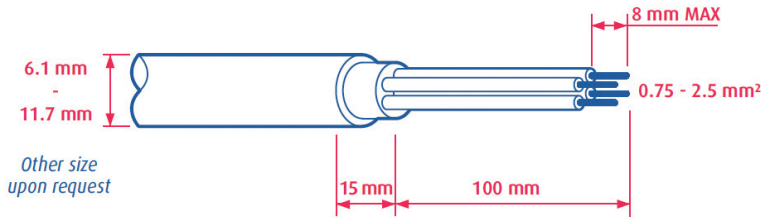


research & development

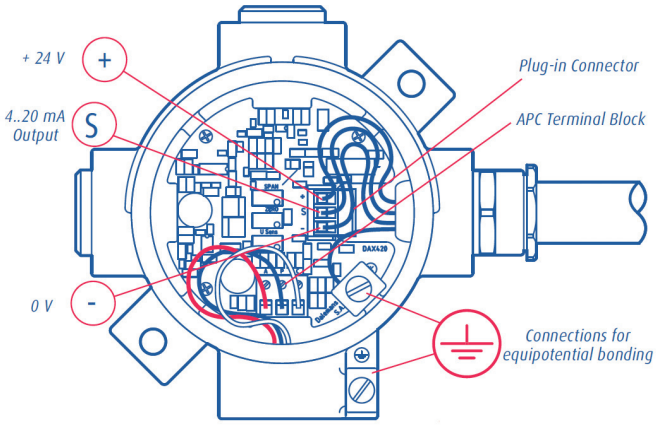
IP-3250 - 03/2014

ELECTRICAL WIRING

Wiring must comply with local regulations and standards in force and meet the electrical requirements of the detector DAX 420. Dalemans recommends the use of colour coded cable with solid wires (3 + 1 for junction box earthing). The acceptable cross sectional area of the cable is 0.75 to 2.5 mm^2 and depends on the type of sensor used and the distance between the detector and the control unit/PLC. For more information about the cross sectional area of the cable and the maximum cable length, please refer to the instruction manual of the control unit/PLC. The overfall cable diameter must be within the range given in image. The junction box may be earthed through the cable shield. The cable shield must be connected to the ground at the control unit/PLC. The cable gland must be sufficiently tightened on the cable to ensure a good sealing.



CONNECT THE DETECTOR



- Loosen the locking screw of the junction box cover using the 1.5 mm hex key OUT00000115 and completely turn the cover counterclockwise to unscrew it.
- Connect wires according to the diagram given in image. Wires must be stripped and plugged so that the gap between insulation and the metallic edge of the terminal connection does not exceed 1 mm distance.
- Internal and external connections are available for equipotential bonding. For the external connection, the cross sectional area of the bonding conductor should be of at least 4 mm^2.
- Screw up the cover on the junction box, hand tighten 1/4 turn. Put the locking screw of the cover back in place and tighten with the 1.5 mm hex key OUT0000115.

EXAMPLE OF PLACEMENT FOR SOME FLAMMABLE GASES*

GAS	FORMULA	DENSITY (air=1)	DETECTOR(S) POSITION
Acetylene	$(CH)_2$	0,90	Ceiling + floor
Butane	C_4H_{10}	2,05	Floor
Cracked gas	-	0,47	Ceiling
Ethylene oxide	C_2H_4O	1,52	Floor
Hydrogen	H_2	0,07	Ceiling
Isobutane	$(CH_3)_3CH$	2,00	Floor
Methane	CH_4	0,55	Ceiling
Natural gas	-	0,68	Ceiling
Propane	C_3H_8	1,56	Floor
Propane-air	-	±1,15	Ceiling + floor

*This list is not exhaustive. Contact Dalemans for further information.

simka
Investigación y Producción S.L. Zweigniederlassung Deutschland

Investigación y Producción S.L.
Zweigniederlassung Deutschland
63457 Hanau - Voltastraße, 10
Deutschland / Germany
Tel.: (+49) 06181/9587-0
Fax: (+49) 06181/958723
info@simka.de - www.simka.de

inpro
research & development

C/Invierno, 4-6
Pol. Ind. "El Malvar"
28500 Arganda del Rey
Madrid
Telf.: (+34) 918 719 294
Fax: (+34) 918 719 256
info@inprosa.net - www.inprosa.net